

WHAT IS CLAIMED IS:

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5 1. A damascene interconnection, comprising:
an interconnection trench formed in an insulating film and a pad trench communicating therewith;
a protrusion formed by a portion not removed of said insulating film in said pad trench to decrease a substantial opening area of said pad trench; and
a conductive film buried in said interconnection trench and said pad trench.

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10 2. A damascene interconnection according to claim 1, wherein said protrusion is formed not to divide said conductive film buried in said pad trench.

3. A damascene interconnection according to claim 2, wherein said protrusion increase a plurality of island protrusions distributed at a proper interval in said pad trench.

4. A damascene interconnection according to claim 2, wherein said protrusion includes a ridge.

15 5. A damascene interconnection according to claim 1, wherein said protrusion is formed to divide said conductive film buried in said pad trench.

6. A damascene interconnection according to claim 5, wherein said protrusion includes a closed-loop ridge encompassing one part in said pad trench.

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20 7. A damascene interconnection according to any of claims 1 to 6, further comprising a contact hole formed in said pad trench and electrically connecting between said conductive film and another conductive film arranged in a level lower than said insulating film.

8. A semiconductor device, comprising:

a semiconductor substrate;

an insulating film formed on said semiconductor substrate;

25 an interconnection trench formed on said insulating film and communicating with

a semiconductor element;

a pad trench formed on said insulating film and communicating with said interconnection trench;

a protrusion formed by a portion of not removed of said insulating film in said pad trench and reducing a substantial opening area of said pad trench; and

a conductive film buried in said interconnection trench and said pad trench.

9. A semiconductor device according to claim 9, wherein said protrusion is formed not to divide said conductive film buried in said pad trench.

10. A semiconductor device according to claim 9, wherein said protrusion includes a plurality of island protrusions distributed at a proper interval in said pad trench.

11. A semiconductor device according to claim 9, wherein said protrusion includes a ridge.

12. A semiconductor device according to claim 8, wherein said protrusion is formed to divide said conductive film buried in said pad trench.

13. A semiconductor device according to claim 12, wherein said protrusion includes a closed-loop ridge encompassing one portion in said pad trench.

14. A semiconductor device according to ~~any of claims 8 to 13~~ ^{claim 8}, further comprising another conductive film formed in a level lower than said insulating film, and a contact hole formed through said insulating film in said pad trench and electrically connecting between said conductive film and said other conductive film.

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